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Editorial by the Guest Editors

Carlos Vaz de Carvalho,
Paula Escudeiro
cmc@isep.ipp.pt

This issue of EJEL is dedicated to Game-Based Learning and, in particular, to ECGBL 2013 – the 7th European Conference on Game-Based Learning. Therefore, we would like to thank the editors of EJEL for allowing us to promote an important area of the use of technology for learning in such a relevant journal.

Games are structured contexts where the player has clear objectives, with victory as the end goal. The player must solve problems, overcome challenges and face opponents (real or game characters) but always respecting a clearly-defined set of rules. More than simple entertainment contexts, games have been shown to promote learning and the development of personal and social skills like socialization, teamwork, leadership, decision making and collaborative learning. Therefore they have been successfully used in training, in formal education (classroom and school context) and also in non-formal education (outside the school context).

The European Conference on Game-Based Learning – ECGBL, has been a reference forum to exchange ideas and best practice among researchers and practitioners. The 2013 edition took place in Porto, last October, and was another opportunity for the presentation of research, theory, application, practice and validation in this field. The conference partnered with SEGAN – Serious Games Network, a European community of practice that gathers more than 500 individuals interested in this area, providing a valuable synergy.

The contribution of the keynote speakers, Prof. Baltasar Fernández-Manjón, from the Complutense University of Madrid and Dr Paulo J. Gomes, from Bigmoon Studios, were paramount by addressing research and practical aspects of GBL. But above all, it was the very high number of contributions ranging from theoretical and empirical studies, work-in-progress, PhD research, to product demonstrations and a game competition that created the conditions for the success of the conference. From that large number of contributions, we selected six that demonstrate the quality of the overall conference and the large scope of targets, topics, technologies and methodologies that GBL already addresses.

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Malliarakis et al present a framework intended for computer programming-specific educational games and instantiated a specific game-example with this purpose. Authors reflect that the need for this framework arises from the necessity of adequate planning during the design of educational games, and thus the availability of adequate guidelines that include all characteristics that should be incorporated in such games.

Katmada et al designed, developed and evaluated an online game for elementary and middle school mathematics teaching and learning. Study results indicated that the students' opinion about the game was positive, and suggest that with some extensions the game could be used as an effective learning tool.

Dourda proposes an educational design proposal that combines Game-based Learning (GBL) and Content and Language Integrated Learning (CLIL). The author designed an educational geography computer game for 11 to 12-year-old students based on problem solving challenges regarding the use of geography in realistic contexts. The findings of this case study suggest that foreign language learning can successfully take place within a geography game-based learning environment, and they underscore the efficacy of approaching GBL in terms of performance.

Magnussen et al report results from the design and testing of an educational version of a scientific discovery game that allows players to help solve authentic scientific challenges. Authors wanted to investigate if and how this type of game concept could strengthen authentic experimental practice and the creation of new knowledge in science education and found that for high school students the aspects of doing "real scientific research" and solving physics problems were the more interesting aspects of playing the game and were highly motivating for students.

Majgaard studied how engineering students could develop programming skills by creating their own games, thereby applying their game-playing experiences to gain knowledge about game design. The didactic approach was based on the constructionist and reflective learning philosophies. The author found that although the constructionist learning approach promoted creative and innovative learning, it did not develop competencies in articulation and analysis. But by considering retrospective reflective discussions in the classroom and their programming experiences it was possible to reinforce the learning process.

Pløhn addresses the concept of pervasive gaming as a new and emerging gaming genre where the physical and social aspects of the real world are integrated into the game and blend into the player's everyday life. The author designed and developed a prototype of a playable pervasive game to support learning in university studies. Study results showed that the game became pervasive and a part of the students/players everyday life. Players found the game exciting and fun to play, but that the academic tasks and riddles that they had to solve during the game were too easy to solve.

We really hope you enjoy this special issue of EJEL, at least as much as we did when reading and selecting these articles.

Carlos Vaz de Carvalho
Paula Escudeiro
Editors

